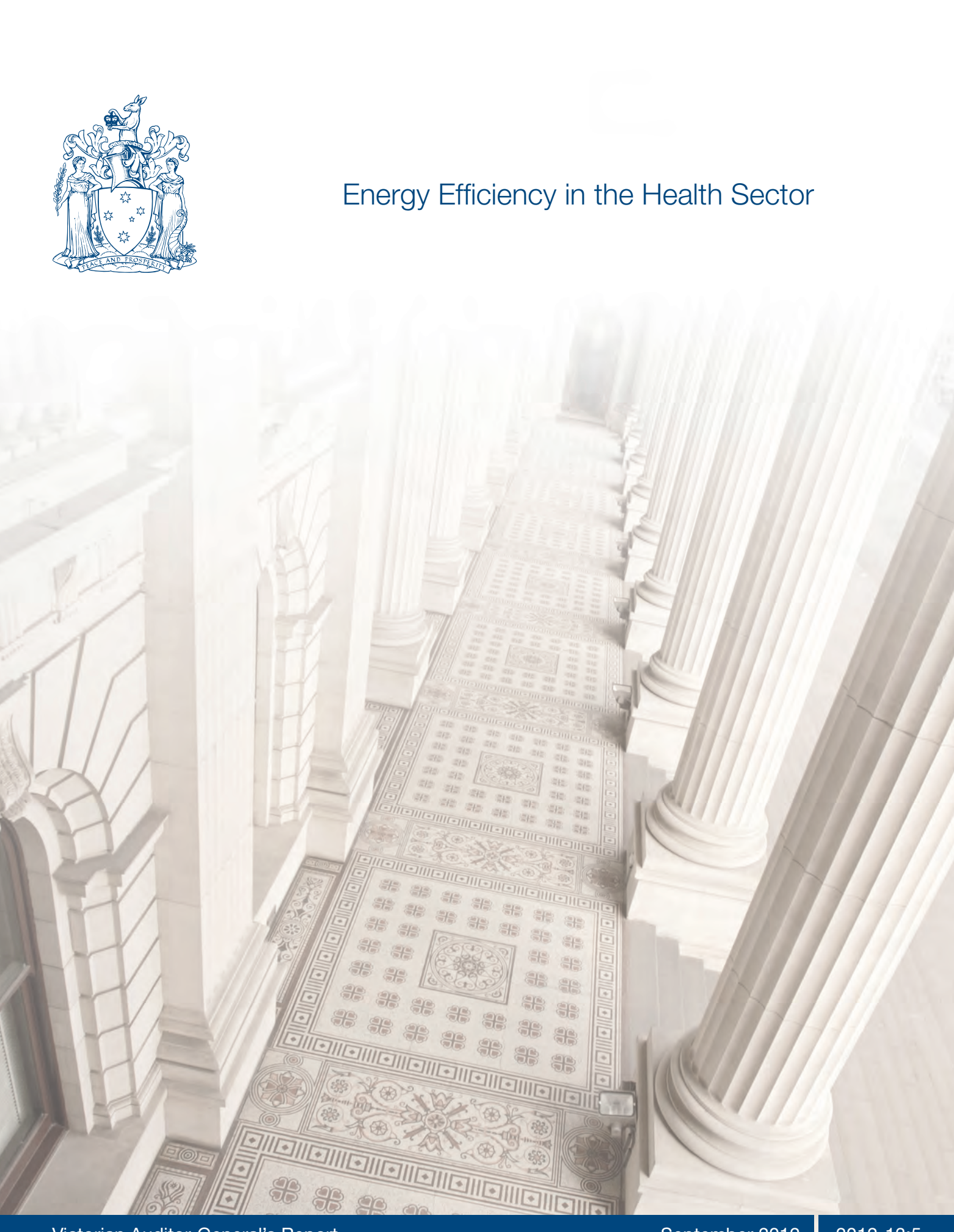
Energy Efficiency in the Health Sector



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Energy Efficiency in the Health Sector

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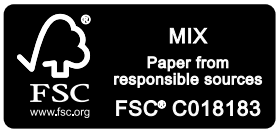

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VAGO

Victorian Auditor-General's Office

Auditing in the Public Interest

The Hon. Bruce Atkinson MLC
President
Legislative Council
Parliament House
Melbourne

The Hon. Ken Smith MP
Speaker
Legislative Assembly
Parliament House
Melbourne

Dear Presiding Officers

Under the provisions of section 16AB of the *Audit Act 1994*, I transmit my report on the audit *Energy Efficiency in the Health Sector*.

Yours faithfully

D D R PEARSON
Auditor-General

12 September 2012

Contents

Audit summary

Victorian public sector facilities account for around 1.5 per cent of Victoria's total electricity and gas consumption. The sector's largest users are healthcare providers—health services and hospitals—which account for around 26 per cent of its total energy consumption.

Most metropolitan hospitals and some regional hospitals are large facilities that have high levels of energy use. This is because of their continuous operating requirements, use of energy intensive medical equipment, infection and temperature control, and on-site services such as kitchens and laundries.

After Victoria's water entities, public hospitals are the second largest emitter of greenhouse gases, accounting for around 20 per cent of public sector emissions.

With large facilities and specific operating requirements, health services spend significant amounts on energy. In 2010–11 alone, Victorian health services' energy costs totalled nearly $70 million, $51 million of which was spent on electricity.

Energy costs in the health sector, while a small part of the total health budget, can have an impact on the financial sustainability of the health system. This is particularly so where funding pressures exist. Energy costs are also rising, partly as a result of the carbon pricing mechanism. Without additional funding or further energy efficiency initiatives, health services may need to allocate more of their budget to energy supply costs, or reduce other healthcare services.

This highlights the significance of energy efficiency across the whole health system. Given the large number of health services across the state, this necessitates a statewide planning approach to the problem.

Conclusions

The Department of Health's (DH) approach to statewide planning for energy efficiency is inadequate. It does not have a documented policy or plan and lacks a strategic focus and a coordinated approach. It also does not align with health services' local planning.

While there have been improvements in energy efficiency across the health system over the past seven years, the lack of an adequate planning approach has potentially limited the gains that could have been made. Specifically, DH's planning approach limits its ability to demonstrate whether it is appropriately allocating resources to areas of greatest need or highest risk, and whether it is sufficiently prepared for emerging challenges.

DH believes that individual health services should be responsible for their own energy efficiency planning. However, this approach is not conducive to optimising and driving outcomes at a system level. Despite this stance, DH undertakes a range of ad hoc centralised activities. These activities include estimating cost pressures on health services to inform future planning activities and investigating the feasibility of expanding cogeneration energy supply—the simultaneous generation of two forms of useful energy—to selected metropolitan and regional hospitals. These activities confuse whether planning for energy efficiency is a statewide or health service level activity.

Findings

Energy efficiency performance measures

Implementing relevant and appropriate performance measures of energy efficiency is challenging in a healthcare environment because each health service differs in terms of its clinical services, patient activity and use of floor space.

DH combines three separate measures to assess health service energy efficiency performance at the statewide level. These measures cover energy consumption 'intensity' by considering floor area, bed days, and separations, which is a measure of an episode of care. These three measures collectively give an indication of health services' energy efficiency.

However, there are deficiencies in each measure that limit the reliability and usefulness of DH's reported energy performance information. These deficiencies mean that DH cannot reliably compare the energy efficiency of health services. DH acknowledges these limitations and is working to improve how it benchmarks health services' energy efficiency.

Statewide energy efficiency performance

Despite the deficiencies with the performance measures, DH and health services' reported performance shows improvement in energy efficiency. Between 2005–06 and 2010–11, the total volume of health services' energy consumption increased by around 1 per cent, or approximately 30 000 gigajoules. This is a positive result given:

- the total floor area across all health services increased by 6.3 per cent, or 149 000m^2
- the total number of bed days increased by 7 per cent, or 311 000
- the total number of separations increased by 16.4 per cent, or 216 000.

Over the same period, health services' energy costs have increased by around 25 per cent. This can be attributed primarily to increases in energy prices, as well as increases in energy use arising from health services' increasing demand for their services.

Health services' total greenhouse gas emissions have also increased by 7 per cent since 2005–06, mainly due to an increased share of electricity use.

A range of initiatives have contributed towards improving statewide energy efficiency. They include changes to energy supply arrangements, the installation of energy efficient products, sustainable infrastructure design and the outsourcing of energy intensive functions.

DH has estimated the total impact of the carbon pricing mechanism on health service expenditure will exceed $13 million in 2013, increasing each year until it reaches nearly $19 million in 2020—around $132 million in total. DH has also projected that health services' total energy consumption and greenhouse gas emissions will continue to increase over this period.

While DH and health services have improved energy efficiency over time, continuing this trend will be a significant challenge.

Statewide planning and implementation

While DH is responsible for statewide health planning, its role in planning for energy efficiency in health services has been limited. This, in part, reflects its devolved accountability model, which allocates responsibility for planning to the health services —a position at odds with the activities it undertakes.

Despite the significance of the energy consumption and associated emissions of Victoria's health services, DH has not adequately planned to address the issue. It does not have a policy or plan for energy efficiency. Rather, it has sustainability principles, not all of which directly relate to energy efficiency. The principles serve as high-level guidance for improving energy efficiency in health services, and include:

- providing support and advice to service partners to assist them and the broader community to adapt to the health implications of a changing climate
- improving environmental performance by integrating sustainability implications in business operations and striving for continual improvements in the management of environmental impacts
- promoting the application of the sustainability actions within broader government policies and programs as they relate to improving the health and wellbeing of Victorians.

With the exception of the sustainability principles and several high-level diagrams showing its sustainability activities, DH has only started to document its efforts to plan more strategically very recently. In June 2012, DH developed a framework for energy management in the health sector, following preliminary feedback from VAGO on its lack of a strategic planning approach. The framework builds on, and updates, DH's broader sustainability direction.

However, it is unclear how DH plans to operationalise and report against the new framework. It is a high-level document and does not include key elements of an effective strategic approach.

DH is taking other actions to improve energy efficiency in health services. The Department of Treasury and Finance's (DTF) Greener Government Buildings program (GGB) requires all departments to improve the energy efficiency of all of their facilities, which for DH are its health services. GGB is now one of DH's key energy efficiency initiatives.

DH has taken a pilot-based approach to implementing GGB in health services. This approach allows DH to adapt the program to a healthcare environment and lower the risks associated with its wider rollout. However, it has taken DH nearly three years of planning to reach the request for tender stage of the pilot project, and the project is around 12 months behind schedule.

While DH considers this approach essential, it cannot be assured that the time and expenditure spent to date will lead to improvements in energy efficiency. This is because DH's actions do not have the full support of DTF—the funder and administrator of GGB—and DH has not actively consulted with the energy service contractors and DTF on its proposed changes to the program's contractual documents. Consequently, there is a risk that DTF may not approve DH's proposed approach.

Health service planning and implementation

Health services are responsible for planning to meet the needs of their local communities. In the absence of an adequate documented statewide planning approach, they need to develop their own plans for improving energy efficiency. These plans should outline goals, actions and monitoring arrangements that will drive continual improvements.

The three health services audited—Austin Health, Eastern Health and St Vincent's—demonstrated adequate planning for energy efficiency at a local level. They used a combination of environmental management strategies and Environment and Resource Efficiency Plans. However, their reporting does not enable the progress of initiatives to be assessed.

Recommendations

Number	Recommendation	Page
1.	The Department of Health, in consultation with health services, should improve the measures it uses to assess health service energy efficiency performance.	16
2.	The Department of Health should adopt a more focused and strategic approach to planning for energy efficiency in the health sector to: • support consistent planning at a health service level • align with statewide goals for health services.	26

Recommendations – *continued*

Number	Recommendation	Page
3.	The Department of Health, in consultation with the Department of Treasury and Finance and health services, should update its strategic implementation plan for the Greener Government Buildings program to incorporate: • the approved program rollout to 20 health services • learnings from the energy performance contract delivered at the Peter MacCallum Cancer Centre.	26
4.	The Department of Health and the Department of Treasury and Finance should agree on which healthcare facilities are to be included in the Greener Government Buildings program going forward.	26
5.	The Department of Health, after consulting the Department of Treasury and Finance and approved energy service companies, should assess the risks associated with: • the Department of Health's modified approach to delivering energy performance contracts in health services • the industry's capacity to deliver energy performance contracts in line with the Department of Health's planned rollout under the Greener Government Buildings program.	26
6.	The Department of Treasury and Finance should strengthen its governance arrangements for the Greener Government Buildings program to: • better protect its investments through the program • influence departments' participation by clarifying roles and responsibilities and its required involvement in delivering and scheduling energy performance contracts • clarify departments' performance reporting obligations • encourage information sharing between departments.	26

Submissions and comments received

In addition to progressive engagement during the course of the audit, in accordance with section 16(3) of the *Audit Act 1994* a copy of this report was provided to the Department of Health, Austin Health, Eastern Health, St Vincent's, the Department of Treasury and Finance and the Environment Protection Authority with a request for submissions or comments.

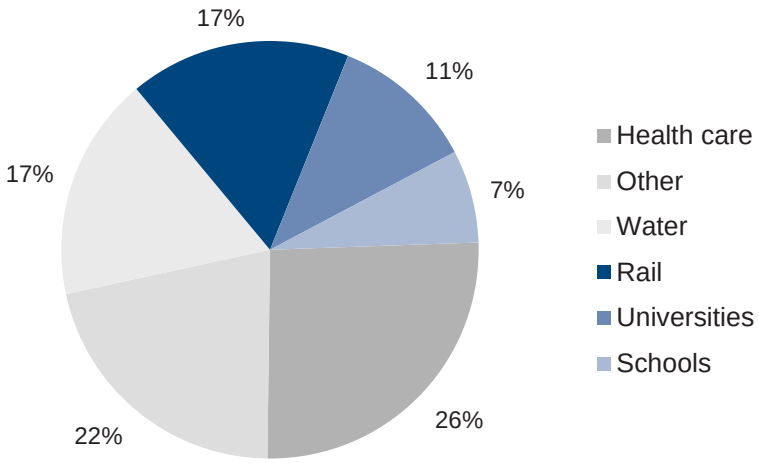
Agency views have been considered in reaching our audit conclusions and are represented to the extent relevant and warranted in preparing this report. Their full section 16(3) submissions and comments are included in Appendix A.

1 Background

1.1 Energy use in the health sector

Victorian public sector facilities account for around 1.5 per cent of Victoria's total electricity and gas consumption. The sector's largest users are healthcare providers—health services and hospitals—which account for around 26 per cent of public sector energy consumption.

Figure 1A
Energy use distribution in the Victorian public sector



Source: Victorian Auditor-General's Office.

Most metropolitan and some regional hospitals are large facilities that have high levels of energy use. This is because of specific operating requirements, such as:

- **continuous operation**—areas such as ward spaces, intensive care units and emergency departments are normally operational 24 hours a day, while other areas like operating theatres and birthing suites are kept on standby should they be needed at short notice
- **use of energy intensive medical equipment**—healthcare is becoming increasingly dependent on using sophisticated equipment that consumes high volumes of energy. This equipment includes machines for magnetic resonance imaging (MRI), magnetic resonance tomography (MRT) and computed tomography (CT) scans

- **infection control**—health services' ventilation systems must keep the air sufficiently clean inside critical areas, such as operating theatres and isolation rooms
- **temperature control**—health services are designed to maintain a tight temperature range, and this includes particularly stringent requirements for some areas such as intensive care
- **on-site services**—large specialist and regional health services often have kitchens and laundries that consume high levels of energy.

Acute care spaces, such as wards, emergency departments and surgical areas typically consume the most energy of all functional areas. This is due to their 24 hour operation and specific domestic hot water requirements, reliance on medical equipment and stringent infection control requirements.

1.1.1 Emissions

Victoria relies on fossil fuels, such as brown coal and natural gas, to generate around 96 per cent of its energy needs. Brown coal alone produces around 55 per cent of Victoria's greenhouse gas emissions.

Through their effect on climate, greenhouse gas emissions pose potential risks to human health, due to increases in extreme weather events and infectious diseases. Recurring heatwaves can lead to specific risks such as heart attacks, strokes and heat exhaustion—all of which are likely to increase the demand on health service providers and their energy consumption.

After Victoria's water entities, health services are the second largest emitter of greenhouse gases, accounting for around 20 per cent of public sector emissions. Additionally, Victorian health services' total greenhouse gas emissions have increased by approximately 7 per cent since 2005–06. The Department of Health (DH) projects that emissions, along with energy use, will continue to grow substantially due to increasing demands on health services.

1.1.2 Costs

While energy costs make up a small proportion of the overall health system budget, health services still spend significant amounts on energy. In 2010–11 alone, Victorian health services' energy costs totalled nearly $70 million, $51 million of which was spent on electricity.

Health services' energy costs have grown by around 25 per cent since 2005–06. This is due to increases in the demand for energy and therefore energy consumption, as well as the increases in energy prices. Improving energy efficiency in health services provides an opportunity to reduce these costs.

DH projects energy costs will grow more rapidly following the introduction of a carbon pricing mechanism in 2012. Modelling commissioned by the department estimates that the annual financial impact of the carbon pricing mechanism on health services will exceed $13 million in 2013, and rise steadily to $19 million by 2020.

1.2 Responsibility

Health services are responsible for managing their own energy efficiency. However, DH remains accountable for the performance of the public health sector as a whole. DH, as the manager of Victoria's public healthcare system:

- provides direction and support to health services in improving energy efficiency
- monitors health services' energy consumption and greenhouse gas emissions
- builds energy efficient healthcare facilities
- researches innovative technologies and alternative energy sources, including cogeneration—the simultaneous generation of two forms of useful energy, such as electricity and heating, from one energy source.

1.3 Responses to improve energy efficiency

Energy efficiency improvements refer to a reduction in the energy used for a given service or level of activity. Actions to improve energy efficiency include:

- improving the efficiency of facilities and equipment, including the replacement of chillers, pumps and lighting
- improving the control of facilities and equipment, including the installation of building automation systems, sensors and timers
- switching to new energy supply sources, such as cogeneration.

Under the previous Victorian Government, various initiatives were developed to improve energy efficiency in health services. The current status of these initiatives varies, with some ceasing, others continuing and some whose status is uncertain.

1.3.1 Greener Government Buildings

The Greener Government Buildings program (GGB) aims to reduce energy costs, water use, and greenhouse gas emissions, through delivering energy and water efficiency projects in existing government buildings and infrastructure. GGB follows an energy performance contract (EPC) model, where energy service providers identify and install energy and water efficiency solutions and guarantee the achievement of projected savings.

All departments are required to participate and meet the following targets:

- By 30 June 2012, facilities accounting for 20 per cent of a department's total energy consumption must be committed to an EPC or equivalent project.
- By 30 June 2018, facilities accounting for 90 per cent of a department's total energy consumption must be committed to an EPC or equivalent project.

The program was announced in 2010, however, departments have been working towards the 2012 and 2018 targets since 2009. The Department of Treasury and Finance administers GGB.

1.3.2 Health services' environmental management measures

In addition to public sector-wide energy efficiency programs, health services implement their own measures to improve environmental performance, often under the direction of DH. These include environmental management strategies, plans and ResourceSmart programs. These measures are designed to reduce environmental impacts and provide indicators of performance with respect to energy consumption, waste production, water usage and greener procurement strategies.

1.3.3 Environment and Resource Efficiency Plans

Under the *Environment Protection Act 1970*, the Environment Protection Authority is responsible for administering the Environment and Resource Efficiency Plans (EREP) program. The EREP program requires all commercial, industrial and government sites that use more than 100 terajoules (TJ) of energy and/or 120 megalitres (ML) of water each year to:

- assess their energy and water use, and waste generation
- develop an EREP that includes actions that pay for themselves within three years or less, to reduce energy and water use and waste production
- implement the actions in the approved EREP
- report yearly on implementation progress.

Eleven Victorian public hospitals participate in the EREP program. The program is currently being reviewed and its continuation is uncertain.

1.3.4 Government Sustainable Energy Targets

The Government Sustainability Energy Targets (GSET) program commenced in 2001 and required each department and statutory authority to:

- improve energy efficiency in government buildings by 15 per cent by July 2006, and by 20 per cent by July 2011
- purchase 10 per cent of their electricity as GreenPower by July 2006, and 25 per cent by July 2011.

Departments and agencies collectively achieved the program's 2006 targets, while performance against the 2011 targets is still to be confirmed in the updated GSET performance report.

The Department of Sustainability and Environment administered the GSET program until June 2011. The future of the GSET program is currently under consideration.

1.3.5 Commonwealth legislation and measures

In addition to Victorian initiatives, there are a number of Commonwealth Acts and measures that may have implications for energy efficiency in the health sector, including:

- the *Clean Energy Act 2011*, which sets a carbon pricing mechanism
- the *National Greenhouse and Energy Reporting Act 2007*, which requires entities that over a certain threshold to report on their greenhouse gas emissions and energy use
- the *Energy Efficiency Opportunities Act 2006*, which requires businesses that use a large amount of energy to identify energy efficiency opportunities
- the *National Environment Protection (National Pollutant Inventory) Measure*, which is a public database showing the emissions of 93 reportable substances reported by organisations.

1.4 Audit objective and method

The objective of the audit was to assess whether the Department of Health and health services have been effective in improving energy efficiency in health services. To address this objective, the audit examined:

- how the Department of Health and health services planned to improve energy efficiency
- whether the Department of Health and health services are implementing energy efficiency initiatives and meeting energy efficiency targets.

The audit examined the role of the Department of Health in planning for energy efficiency across the health sector. It also examined the planning and actions taken to improve energy efficiency at three selected metropolitan health services: Austin Health, Eastern Health and St. Vincent's.

The audit also examined the activities of the Department of Treasury and Finance in administering GGB, and the Environment Protection Authority in overseeing the EREP program.

The audit was conducted in accordance with Australian Auditing and Assurance Standards.

The total cost of this audit was $330 000.

2 Improving energy efficiency in the health sector

At a glance

Background

As demand for health services has increased, so too has energy consumption. Several programs have operated for over a decade which aim to improve energy efficiency. Greater consideration has also been given to the environment and energy use in health service capital works. There is an expectation that efficiencies in health service energy use will be achieved.

Conclusion

The Department of Health (DH) and health services have improved energy efficiency in health services over the past six years. However, continuing that improvement will be a significant challenge. This is due to the financial impact of increasing prices on health services' energy costs—estimated by DH to total $132 million between 2012 and 2020. Without additional funding or further energy efficiency initiatives, health services may need to allocate more of their budget to energy supply costs, or reduce other healthcare services.

Findings

- Health services have improved their energy efficiency, despite rising energy prices and demand. However, health services' total greenhouse gas emissions have increased since 2005–06.
- There are deficiencies in DH's energy efficiency measures, limiting the relevance and appropriateness of its energy efficiency performance information.
- Shortcomings in DH's energy data mean the cost effectiveness of programs and activities designed to improve energy efficiency cannot be reliably measured.

Recommendation

The Department of Health, in consultation with health services, should improve the measures it uses to assess health service energy efficiency performance.

2.1 Introduction

As demand for health services has increased, so too has their energy consumption. This reflects the overall size of healthcare facilities, use of energy intensive medical equipment, provision of air-conditioned spaces within health services, and 24-hour, 7-day operation.

Over the past decade, several initiatives, including the Government Sustainability Energy Targets program and environmental management plans, have sought to improve energy efficiency in the health sector. There has also been a greater consideration of the environment and energy efficiency in health service capital works through the Department of Health's (DH) capital works guidelines.

There is an expectation that efficiencies in health service energy use will be achieved.

2.2 Conclusion

The performance measures that DH uses indicate that energy efficiency has improved over the past six years. However, these performance measures are limited in their relevance and appropriateness. Nevertheless, while there has been a small overall increase in energy consumption over this period, total floor space and patient throughput have had greater increases—thus demonstrating marked improvements in energy use and efficiency.

The cost effectiveness of the initiatives contributing to the improvements is unknown. This is because DH's data is not sufficient to provide this information.

Continuing to improve health services' energy efficiency will be a significant challenge. This is due to the financial impact of increasing energy prices on health services' energy costs—estimated by DH to total $132 million between 2012 and 2020. This may require health services to allocate more of their budget to energy supply costs or reduce other healthcare services.

2.3 Health service performance

2.3.1 Performance measures

Developing relevant and appropriate performance measures of energy efficiency is challenging in a healthcare environment because each health service differs in terms of its clinical services, patient activity and use of floor space.

DH uses three separate measures to assess health service energy efficiency performance at the statewide level. These measures relate to energy consumption 'intensity' by considering:

- **floor area**—the sum of the area of each floor in a health service facility
- **bed days**—the total length of stay of an overnight patient, disregarding any changes in type of care
- **separations**—an episode of care for an admitted patient, which can be the total length of stay in a hospital, or a portion of a hospital stay beginning or ending in a change in type of care.

DH combines these three measures to give a collective indication of health services' energy efficiency. However, as shown in Figure 2A, there are deficiencies in each measure that limit the relevance and usefulness of DH's energy performance information.

Figure 2A
The Department of Health's energy intensity measures

Energy intensity measure	Advantages	Disadvantages
Floor area	Strongest correlation to energy use of the three measures used. Widely understood measure. Allows comparison to other sectors.	Does not differentiate between: • types of floor space • hours of use of each type of floor space • fuel mixes (e.g. electricity and gas).
Bed days	Demonstrated correlation to energy use. It is a key output measure of health service delivery.	Only includes hospital admissions. It excludes: • aged care prior to 2011–12 • non-admitted emergency presentations • out-patient services. Does not account for non-patient activities (e.g. research, support services). Does not differentiate between types of beds. Does not differentiate between fuel mixes.
Separations	Demonstrated correlation to energy use. It is a key output measure of health service delivery.	Only includes hospital admissions. Does not account for non-patient activities (e.g. research, support services). Does not reflect that separations come in different types and lengths. Does not differentiate between fuel mixes.

Source: Victorian Auditor-General's Office based on information from the Department of Health.

Both floor area and bed days are measures used commonly in other jurisdictions. However, Victoria is the only Australian jurisdiction using the separations measure. Significantly, bed days and separations only include admitted patients and therefore exclude a large portion of patient activity—around 990 000 non-admitted emergency department patients were treated at Victorian hospitals throughout 2011. While these patients are accounted for in energy use by floor area, this measure does not differentiate between how floor area is used in each facility. For example, this measure would include facility-based car parking at hospitals. While these make up part of the total floor area, they use considerably less energy than the hospital facilities, and therefore lower the overall energy consumption by total floor area. As a result, this may not reflect the actual consumption for health services.

The deficiencies of these performance measures also mean that DH cannot reliably compare the energy efficiency of health services. DH advised that there are significant challenges in obtaining the detailed data needed from all hospitals to overcome these deficiencies, particularly when older hospitals were designed without consideration of this need. DH acknowledges these limitations and is working to improve how it benchmarks health services' energy efficiency. This has included leading work with the Australasian Healthcare Infrastructure Alliance to develop a broad energy baseline for a large metropolitan hospital. DH needs to continue its work in this area.

2.3.2 Statewide energy efficiency performance

Despite deficiencies with the performance measures, DH and health services' reported performance shows improvement in energy efficiency. Between 2005–06 and 2010–11, the total volume of health services' energy consumption increased by around 1 per cent, or approximately 30 000 gigajoules. This is a positive result given:

- the total floor area across all health services increased by 6.3 per cent, or 149 000m^2
- the total number of bed days increased by 7 per cent, or 311 000
- the total number of separations increased by 16.4 per cent, or 216 000.

Figure 2B shows that health services have improved their energy efficiency when floor area, separations and bed days are considered. However, over this same period energy costs have steadily increased by around 25 per cent. This can be attributed to increases in energy prices.

Of the three measures used, consumption by separations implies significantly greater improvements compared with the other two measures. This reflects the number of admitted patients being discharged. The increasing use of same day admitted services means that multiple patients can be admitted and discharged in the same day, which will tend to exaggerate the improvements when this measure is used.

Figure 2B
Statewide energy efficiency of health services

Measure	2005–06	2006–07	2007–08	2008–09	2009–10	2010–11	Change %
Total consumption (GJ '000)	4 413	4 424	4 487	4 485	4 446	4 442	**1**
Consumption by floor area (GJ/m^2)	1.88	1.85	1.84	1.84	1.79	1.78	**–5**
Consumption by separations (GJ)	3.36	3.26	3.22	3.16	3.05	2.91	**–14**
Consumption by bed days (GJ)	0.99	0.99	0.99	0.98	0.96	0.94	**–6**
Total energy expenditure ($'000)	$55 268	$55 671	$61 263	$63 892	$69 799	$69 591	**26**
Energy unit cost ($/GJ)	$12.53	$12.58	$13.65	$14.24	$15.70	$15.67	**25**

Note: GJ = gigajoules.
The Department of Health has not yet finalised figures for 2011–12.
Source: Victorian Auditor-General's Office based on data from the Department of Health.

A similar issue exists for emissions in Figure 2C. It shows that health services' total greenhouse gas emissions have increased by 7 per cent since 2005–06, mainly due to an increased share of electricity use. However, over this period the intensity of emissions has remained stable in relation to floor area and bed days, while emissions by separations have decreased by 8 per cent.

Figure 2C
Statewide greenhouse gas emissions by health services

Measure	2005–06	2006–07	2007–08	2008–09	2009–10	2010–11	Change %
Total greenhouse gas emissions (tonnes)	654 442	671 144	687 177	682 852	702 770	701 747	**7**
Emissions by floor area (tonnes/m^2)	0.278	0.281	0.281	0.280	0.283	0.281	**1**
Emissions by separations (tonnes)	0.499	0.495	0.493	0.481	0.482	0.459	**–8**
Emissions by bed days (tonnes)	0.147	0.149	0.152	0.150	0.152	0.148	**0**

Note: Figures for 2011–12 have not yet been finalised by the Department of Health.
Source: Victorian Auditor-General's Office based on data from the Department of Health.

Factors contributing to statewide performance

Figure 2D shows DH's range of initiatives that have contributed towards improving statewide energy efficiency, and the annual financial savings attributed to these initiatives compared to the original investment. These initiatives include changes to energy supply arrangements, the installation of energy efficient products, sustainable infrastructure design and the outsourcing of energy intensive functions.

DH expects that the savings from the Hospital Energy Supply Project and the Greening Our Hospitals energy grant program will exceed the initial investment over the life of the projects—making the initiatives successful in both reducing energy consumption intensity and making financial savings.

However, not all initiatives are directly energy related, and therefore while the energy and financial savings may be a by-product of the initiative, they cannot be easily attributed to it. For example, the capital works guidelines include a range of sustainability initiatives that work together to reduce the overall environmental impact of capital works and result in reductions in energy consumption intensity. Consequently, it is difficult to isolate the direct annual energy and financial savings from a decrease in energy consumption intensity.

DH's main energy database—the Agency Information Management System (AIMS)—does not hold the data required to show the savings gained from all energy-related initiatives. Therefore it is not possible to determine the cost-effectiveness of statewide investment in health services' energy efficiency. DH acknowledges that AIMS can be improved to better understand performance and is now exploring options to upgrade or replace the system.

Figure 2D
Factors contributing to a reduction in health services' energy consumption intensity

Initiative	Description	Total investment ($million)	Annual energy savings (GJ)	Annual energy savings ($'000)
Hospital Energy Supply Project	Resulted in DH entering into a new contract in July 2010 to provide selected health services with 36 megawatts of energy through cogeneration. Also improved the security of hospitals' energy supply and avoided capital costs to provide hospitals with an equivalent level of grid energy supply.	$24.8	48 726	$982
Environment Improvement Fund	Provided loans for energy efficiency initiatives at nine health services.	$1.7	n/a	n/a

Figure 2D
Factors contributing to a reduction in health services' energy consumption intensity – *continued*

Initiative	Description	Total investment ($million)	Annual energy savings (GJ)	Annual energy savings ($'000)
Greening Our Hospitals energy grant program	Funded various energy efficiency projects across health services, including two projects at Barwon Health and Austin Health.	$0.8	21 982	$212
Energy performance contract at the Peter MacCallum Cancer Centre	Small scale energy performance contract including upgrades to building controls and mechanical refurbishments.	$0.37	5 384	$94
Outsourcing support services	North East Health outsourced part of its laundry services in 2009, which shifted energy consumption to an external service provider.	$0	17 657	$50
Sustainability in healthcare capital works	Compliance with DH's guidelines for sustainability in healthcare capital works has led to new and refurbished floor spaces being designed to be more energy efficient.	n/a	n/a	n/a
Statewide Infrastructure Replacement Program	Has indirectly contributed to improvements in health services' energy efficiency through asset replacement.	$20	n/a	n/a

Note: GJ = gigajoules.
'n/a' refers to where DH does not hold the data required to show the savings.
Source: Victorian Auditor-General's Office, based on information from the Department of Health.

Forecasting future statewide performance

While DH and health services have improved energy efficiency over time, continuing this trend will be a significant challenge because energy prices are expected to continue to increase. DH has estimated the total impact of the carbon pricing mechanism on health service expenditure will exceed $13 million in 2013, increasing each year until it reaches nearly $19 million in 2020—around $132 million in total.

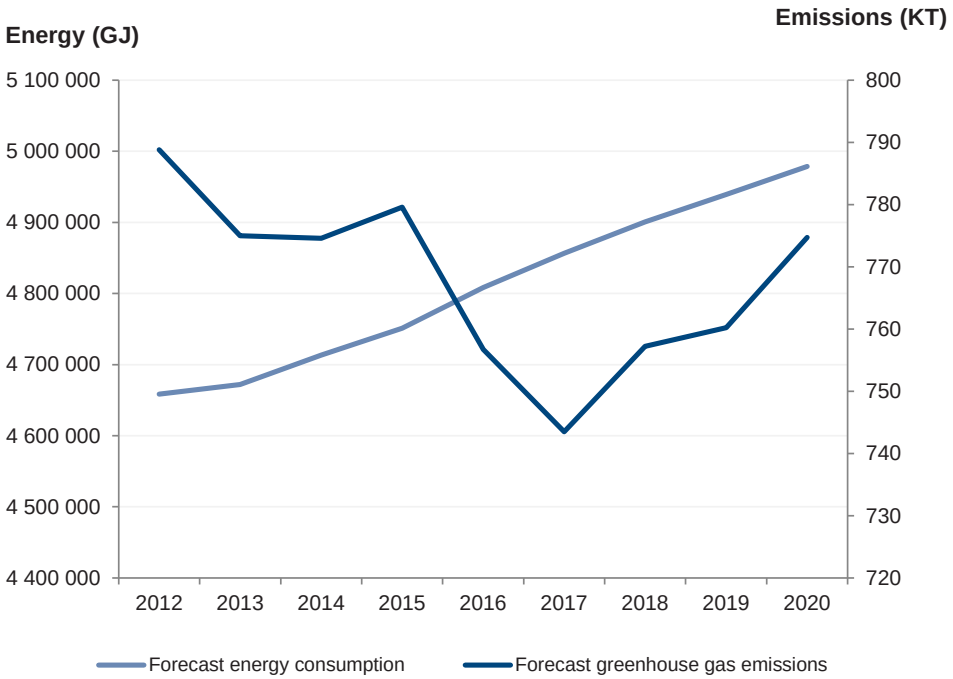
DH has used this data to inform a 2012–13 Budget submission seeking funds to cover the forecast increases. Without additional funding, health services may need to allocate more of their budget to energy supply costs, or reduce other healthcare services. This will limit their capacity to achieve further efficiency gains.

DH has also projected that health services' total energy consumption and greenhouse gas emissions will continue to increase over time. As shown in Figure 2E, DH estimates that:

- public hospital energy consumption will rise by 7 per cent between 2012 and 2020, with significant growth expected in electricity use
- public hospital emissions will decrease by 6 per cent between 2012 and 2017, as a result of increases in renewable energy generation and the retirement of brown coal generating assets. However, emissions are then expected to increase by 4 per cent from 2017 to 2020 due to increased service demands on public hospitals.

DH's modelling, and particularly the predicted decrease in emissions between 2012 and 2017, is based on several policy assumptions—namely that there will be an increase in renewable energy and that high emission energy generation will decrease. Achieving these targets will require the effective and timely implementation of these policies.

Figure 2E
Projected energy consumption and greenhouse gas emissions of Victorian public hospitals



Source: Victorian Auditor-General's Office based on SKM report *Impact of carbon pricing on the Victorian healthcare system*.

2.3.3 Health services' energy efficiency performance

Comparing the performance of one health service with another can be misleading without a consistent performance baseline. A baseline would provide information on historical energy consumption and costs, and allow for the assessment of a health services' energy performance over time in order to track improvements. The absence of a baseline prevents an assessment of the most effective and reliable energy efficiency initiatives across the sector.

Based on an assessment of health service performance without a baseline, and using 2005–06 as a starting date and just the floor space indicator, the energy efficiency of the three audited health services has varied between 2005–06 and 2010–11:

- Austin Health has reduced its energy consumption by 30 per cent, or 0.58 gigajoules per m^2.
- Eastern Health has reduced its energy consumption by 6 per cent, or 0.11 gigajoules per m^2.
- St Vincent's Health has increased its energy consumption by 2 per cent, or 0.03 gigajoules per m^2.

Austin Health's sharp improvement in energy efficiency has directly resulted from upgrades to boilers at Austin Hospital and Heidelberg Repatriation Hospital. This has reduced its total natural gas consumption by 43 per cent, or 119 000 gigajoules between 2005–06 and 2010–11.

There is no single distinguishing initiative that has impacted significantly on Eastern Health's and St Vincent's Health's energy efficiency performance between 2005–06 and 2010–11. In Eastern Health's case it has improved energy efficiency over time through various smaller projects, including upgrades to air conditioning systems, lighting and ICT equipment.

2.4 Improving energy efficiency data reporting

It is important that DH's and health services' environmental data and systems provide accurate and current information on their energy efficiency performance. Having this information should enable them to identify areas for improvement in energy efficiency and reductions in environmental impacts.

Health services' systems provide reasonable data on their energy consumption. While information systems vary, each is focused on fulfilling a range of reporting obligations, namely:

- internal monitoring of energy consumption
- energy use and cost reporting for DH's Agency Information Management System (AIMS)
- reporting progress and energy use in line with the Environment Protection Authority's Environment and Resource Efficiency Plans
- reporting under the Federal Government Greenhouse and Energy Reporting System
- reporting under the Federal Government National Pollutant Inventory.

Complying with these different reporting obligations means that health services duplicate much of their energy information. Both St Vincent's and Austin Health reported that these requirements are excessive and place too much focus on compliance rather than on improving their own energy efficiency. Austin Health is the most advanced in addressing this issue because it has a custom-built system that can automatically generate its various reports.

The consumption and cost data that DH collates in its AIMS system provides each health service with an annual data report of their overall energy performance. DH compiles these reports to enable health services' to assess their own energy performance, and to identify possible improvements to their energy efficiency over time.

There are opportunities to enhance AIMS, particularly in calculating the savings achieved through specific initiatives. DH is now working with health services to explore the possibility of replacing or upgrading the current system to improve the range, quality, timeliness and availability of environmental data, and reduce the data duplication caused by health services' energy reporting requirements.

Recommendation

1. The Department of Health, in consultation with health services, should improve the measures it uses to assess health service energy efficiency performance.

3 Planning for and managing energy efficiency in the health sector

At a glance

Background

As significant energy users and greenhouse gas emitters, it is important that health services improve energy efficiency. Achieving these improvements requires a planned approach that is effectively implemented.

Conclusion

The Department of Health's (DH) approach to planning for energy efficiency is inadequate. It does not have a documented policy or plan and lacks a strategic focus and a coordinated approach. It also does not align with health services' local planning. This limits its ability to demonstrate whether it is appropriately allocating resources, or is prepared for emerging challenges. DH believes that individual health services should be responsible for their own energy efficiency planning. However, this approach is not conducive to optimising and driving outcomes at a system level.

Findings

- Despite the significance of the energy consumption and associated emissions of Victoria's health services, DH has not adequately planned to address the issue.
- With the exception of DH's sustainability principles, there is no planning that clearly outlines DH's strategic approach to improving energy efficiency within health services.
- While DH's planning is limited, it is taking action to improve energy efficiency in health services through the Greener Government Buildings program which is now one of DH's key energy efficiency initiatives.

Recommendations

- The Department of Health should adopt a more focused and strategic approach to planning for energy efficiency in the health sector.
- The Department of Treasury and Finance should strengthen its governance arrangements for the Greener Government Buildings program.

3.1 Introduction

Public hospitals are the Victorian public sector's biggest user of energy and second biggest emitter of greenhouse gases. Improving the energy efficiency of health services has the potential to reduce not only environmental impacts, but also the impact of rising energy costs on health service budgets and service delivery. Achieving these improvements requires a planned approach at a statewide and local level that is both coordinated and strategic.

3.2 Conclusion

The Department of Health's (DH) approach to statewide planning for energy efficiency is inadequate. It does not have a documented policy or plan and lacks a strategic focus and a coordinated approach. It also does not align with health services' local planning. This limits its ability to demonstrate whether it is appropriately allocating resources, or is prepared for emerging challenges.

DH believes that individual health services should be responsible for their own energy efficiency planning. However, this approach is not conducive to optimising and driving outcomes at a system level. DH undertakes a range of ad hoc centralised activities, including estimating cost pressures on health services to inform future planning activities, and investigating the feasibility of expanding cogeneration energy supply to selected metropolitan and regional hospitals. Again, these lack strategic focus, are uncoordinated and do not align with health services' local planning. This means there is no cohesive system-wide approach to assuring that policies are being implemented as intended. It also does not allow for experience to be shared in a way that builds on successes and avoids the repetition of unintended outcomes.

One of DH's key mechanisms for improving health service energy efficiency is the Department of Treasury and Finance's (DTF) Greener Government Buildings program (GGB), which involves mandatory targets within set time frames. DH has taken a cautious approach to planning for this program, and consequently will face significant challenges in meeting the targets in the time frame expected.

3.3 Statewide planning and implementation

With 87 health services across the state, there is a need for a coordinated and strategic approach to planning for energy efficiency. The consequence of not doing so is that increased energy use, and therefore costs, will be borne by government and taxpayers. The approach to planning should be documented in a way that aligns policy objectives with implementation and:

- details the actions needed to drive improvement in the short and long term, with time frames for implementation
- outlines priority issues and resource requirements
- details the management of risks
- details monitoring arrangements
- aligns statewide and health service level planning.

While DH is responsible for statewide health planning, its role in relation to planning for energy efficiency has been limited. This, in part, reflects its devolved accountability model, which allocates responsibility for planning to the health services—a position at odds with the activities it undertakes.

3.3.1 The Department of Health's energy efficiency policies and plans

DH does not have a policy or plan for energy efficiency. Rather, it has sustainability principles, and not all of these directly relate to energy efficiency. The principles serve as high-level guidance for improving energy efficiency in health services, and include:

- providing support and advice to service partners to assist them and the broader community in adapting to the health implications of a changing climate
- improving environmental performance by integrating sustainability implications in business operations and striving for continual improvements in the management of environmental impacts
- promoting the application of the sustainability actions within broader government policies and programs as they relate to improving the health and wellbeing of Victorians.

DH's planning approach has generally been ad hoc and does not always align with health services' local energy efficiency planning. This approach covers a range of important yet disconnected initiatives, including:

- commissioning work to estimate the financial impact of the carbon pricing mechanism, in addition to wider cost pressures, on health services to inform future planning activities
- investigating the feasibility of expanding cogeneration energy supply to selected metropolitan and regional hospitals. This work is significant because DH's preliminary modelling estimates that installing cogeneration in 14 of the largest Victorian health facilities would result in annual greenhouse gas reductions of 163 333 tonnes and recurrent cost savings of $17.3 million
- investigative studies aimed at enhancing the understanding of specific issues, for example, the contribution of medical equipment to a hospital's total energy consumption
- its preparatory work for implementing energy performance contracts (EPC) under DTF's GGB program
- integrating energy efficiency into healthcare capital projects
- working with health services to install energy saving measures at existing facilities
- working with health services to develop and implement environmental management strategies.

With the exception of the sustainability principles and several high-level diagrams showing its sustainability activities, DH has only very recently started to document its efforts to plan more strategically. In June 2012, DH developed a framework for energy management in the health sector—following preliminary feedback from VAGO on its lack of a strategic planning approach—recognising their statewide planning role for energy efficiency. The framework builds on, and updates, DH's broader sustainability guidance.

However, it is unclear how DH plans to operationalise and report against the new framework. It is also a high-level document and does not prioritise resources or allow for a cost-benefit analysis of its operational aspects. This does not enable DH to better assign resources to strategies that may achieve the best energy efficiency outcome for health services. DH advised that the framework will be communicated to health services through the department's broader sustainability communication program.

While DH is responsible for statewide planning, its stated position in relation to energy efficiency is to devolve planning responsibility to health services. This approach has the potential to result in a lack of coordination—exacerbated by the number of health services individually planning—and lacks a strategic focus because of the individualised local planning. It is also not conducive to optimising and driving outcomes at a system level. However, DH's devolved model is not supported by its energy efficiency practices, which reduce the clarity around whether DH or health services are responsible for specific planning functions.

The lack of clarity about whether planning is centralised or devolved is evidenced by:

- DH developing sustainability principles and committing to embed them in health service practices
- DH's requirement that health services have environmental management plans
- DH's role in collecting, collating and providing standardised reports to health services on their energy consumption and energy costs
- DH centrally developing and managing health service involvement in GGB, including developing consistent contracts and managing the tender processes.

3.3.2 Planning and implementation under the Greener Government Buildings program

DH is taking action to improve energy efficiency in health services. DTF's GGB requires all departments to improve the energy efficiency of their facilities, which for DH are its health services. In addition to the initiatives identified earlier, GGB is now one of DH's key energy efficiency initiatives.

Planning for the Greener Government Buildings program

DH has taken a pilot-based approach to implementing GGB in health services. Austin Health was chosen as the first health service to take part in the program due to its high energy consumption and willingness to participate. This approach allows DH to adapt the program to a healthcare environment and lower the risks associated with its wider rollout.

In line with DTF requirements, DH first developed a plan for the pilot project in 2009 and then updated it in 2011. Broadly, the 2009 and 2011 plans outline:

- the Austin Health facilities included in the pilot
- the types of healthcare facilities to be excluded from the program
- the proposed governance arrangements for the pilot project
- the estimated time lines for implementing the pilot project
- its capacity to meet the targets and manage risks
- an environmental profile of health services.

The pilot project has fallen significantly behind schedule since starting in 2009. While DH originally planned to go to tender for the pilot in 'early 2011', this did not occur until May 2012. Since it started, planning for the pilot has taken around three years.

The project delays have resulted directly from DH and Austin Health identifying and responding to specific concerns they identified with GGB. These issues included:

- the application of DTF's standard GGB processes and templates in a healthcare environment
- the costs incurred by DH and Austin Health if latent conditions, such as asbestos, are discovered during the EPC process
- the level of transaction costs that would be incurred by DH and Austin Health in implementing the pilot project.

To address these concerns, DH has sought technical project management, commercial, legal and insurance advice. It has also made extensive changes to DTF's standard contract. The cost of DH's actions is around $371 000 as of February 2012.

Sound planning is critical to effective program implementation. While DH and Austin Health consider their approach essential to reduce the risks associated with the pilot project and to improve the future rollout of the program across other health services, they cannot be assured that their investment in time, and expenditure to date, will lead to improvements in energy efficiency. This is because DH's actions do not have the full support of DTF—the funder and administrator of GGB—and DH did not actively consult the energy service contractors (ESCOs) and DTF on its proposed changes to the contractual documents.

In amending the standard contract, DH has strengthened its position compared with the original contract. Instead of consulting with the ESCOs in making these changes, it provided them with this information when the pilot project went to tender in May 2012. Considering that the ESCOs have not seen this contract before—having worked previously under the standard contract—they will be unfamiliar with the changes, some of which involve increased protection and flexibility for DH and Austin Health. This creates the risk that the ESCOs will challenge the amendments, or price the transfer of risk, further delaying the project due to prolonged contract negotiations and potentially increasing the cost of the program.

DTF is opposed to the extent of work carried out by DH to address its concerns with GGB. DTF has accepted some of DH's changes to the standard GGB contracts, however, it believes that many other changes to the contract were unnecessary on the basis that health services are not a unique environment for delivering EPCs, citing examples of successful EPCs delivered in Queensland and internationally. DTF also considers the risks associated with the latent conditions are low. DH and DTF need to resolve these differences in opinion.

Ultimately there is little effective collaboration and consultation between DH and DTF around GGB. This has been exacerbated by DTF not exercising effective governance and oversight of the agencies involved in GGB, and thus DTF is not in a position to guide and influence DH's activities. The GGB guidelines, which DTF developed and 'own' lack the governance arrangements needed to influence DH's extensive changes to the standard GGB contracts and processes. While this issue has been partly addressed by DH inviting DTF to sit on its newly established GGB steering committee, DTF still needs to strengthen its guidelines to improve governance and better protect its investments.

A consequence of what is ultimately a thorough but poorly managed planning process is that DH, in its 2011 plan, acknowledged that it would not meet the GGB target of having sites that account for 20 per cent of its total energy consumption committed to undertaking an EPC by 30 June 2012.

Implementing the Greener Government Buildings program across the health sector

In April 2012, DH approved the rollout of GGB across 20 of Victoria's largest energy using health services between 2012–13 and 2015–16, at a total estimated cost of $59 million. According to DH's preliminary scheduling for this rollout, it believes it is well placed to meet the 2018 target of having at least 90 per cent of its total energy consumption committed to undertaking an EPC.

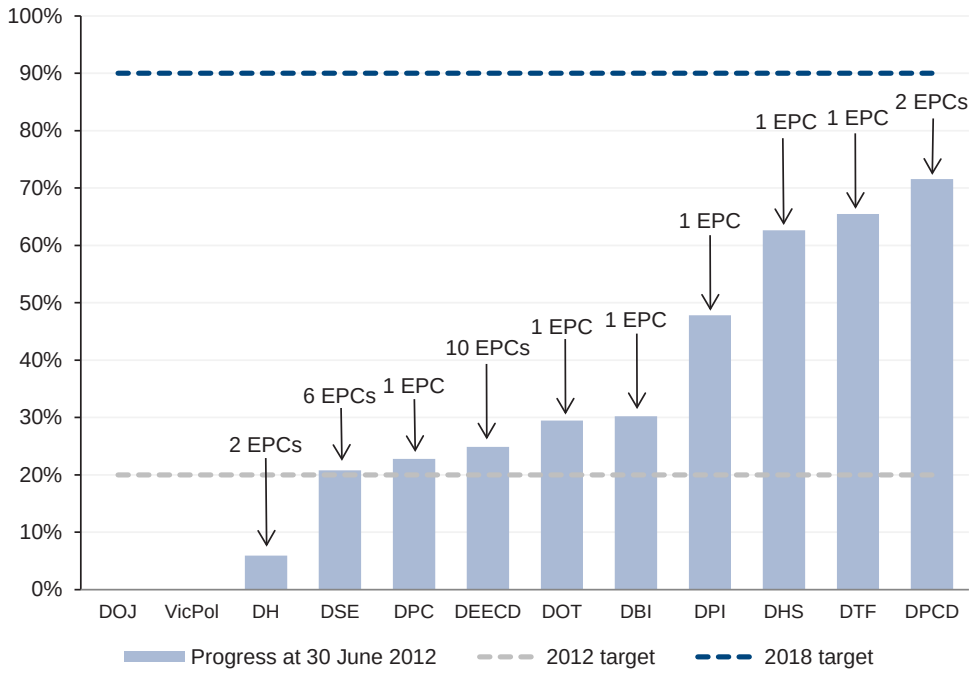
However, meeting this target will be a significant challenge because:

- DH has been planning for the single pilot project since 2009 and only went to tender in May 2012.
- DH excluded selected new and soon to be redeveloped facilities from its preliminary scheduling for GGB, despite DTF rejecting DH's request to do this in March 2012. In DTF's view opportunities remain to implement EPCs and achieve energy savings at these types of facilities. These facilities form part of DH's 90 per cent target.
- DH estimates that, without the exclusion of new and soon to be redeveloped facilities, it would need to implement as many as 50 EPCs to meet the target, or 7–8 EPCs per year between 2012 and 2018.

Importantly, there is no certainty that there is enough industry capacity to develop the EPCs required for DH to meet its 2018 target. This risk has become more significant as the pilot project has fallen behind and condensed DH's schedule for rolling out EPCs across the health sector. DH will need to draw heavily upon DTF's knowledge of industry capacity to manage this issue throughout the rollout.

Figure 3A compares DH's progress towards the GGB targets with other departments. The work required to meet the targets varies between departments, depending on the total energy consumption of each. Specifically, to meet the 2018 target DH needs to develop enough EPCs to cover 3 651 000 gigajoules of energy use. In contrast, the Department of Planning and Community Development appears to be the most advanced department under the program, but only needs enough EPCs to cover 288 000 gigajoules of energy use.

Figure 3A
Summary of departments' progress towards Greener Government Buildings targets



Source: Victorian Auditor-General's Office based on data from the Department of Treasury and Finance.

Collectively, departments have achieved GGB's 2012 target of having 20 per cent of government facilities committed to an EPC or equivalent project.

GGB has the potential to deliver substantial energy savings through implementing EPCs across Victorian health services:

- During 2010–11, all Victorian health services together consumed around 4 442 000 gigajoules of energy, equivalent to more than 700 000 tonnes of greenhouse gas emissions.
- A small-scale EPC at the Peter MacCallum Cancer Centre is currently delivering annual savings of $136 236 and 2 496 tonnes of greenhouse gas emissions. It has achieved this by upgrading building controls and undertaking mechanical refurbishments.
- A recent large scale education EPC covering the entire RMIT University portfolio is expected to deliver annual savings of approximately $3.25 million and nearly 30 000 tonnes of greenhouse gas emissions. It will achieve this by upgrading heating, ventilation and air conditioning (HVAC), lighting, co- and tri-generation systems—all of which are relevant to a healthcare environment.
- A previous EPC delivered at Ipswich Hospital in Queensland led to annual savings of $106 000, or 142 363 kilowatts of electricity. This included upgrades to HVAC systems and the hospital's building management system.

While DH and Austin Health view their approach to planning as essential for GGB in health services, their failure to do this efficiently has reduced the potential energy and financial savings that health services can make through GGB. Consequently, health services will bear the increasing energy costs and the potential impact on services.

3.4 Health service planning and implementation

Health services are responsible for planning to meet the needs of their local communities. In the absence of a documented statewide planning approach, they need to develop their own plans for improving energy efficiency. These plans should outline goals, actions and monitoring arrangements that will drive continual improvements.

The three health services audited demonstrated adequate planning for energy efficiency at a local level. They used a combination of environmental management strategies (EMS) and Environment and Resource Efficiency Plans (EREP). However, their reporting does not enable the progress of initiatives to be properly assessed.

3.4.1 Health services' energy efficiency policies and plans

Each of the three audited health services has adequate policies for improving energy efficiency. Each has also documented an EMS that includes reasonable goals, for example:

- Eastern Health's goals include reducing energy consumption per bed day by 1 per cent by 2012
- Austin's Health's goals include achieving a 10 per cent reduction in energy consumption across all Austin Health sites by the end of 2013
- St Vincent's goals include reducing energy consumption by at least 5 per cent by 2013.

Health services' energy efficiency action plans are documented in their EMS and EREPs. Austin Health's EMS and EREP actions have focused on maintaining air handling units, installing variable speed drives to improve boiler efficiency, and reprogramming lighting control. St Vincent's EMS and EREP actions have focused on replacing older, energy inefficient infrastructure and installing variable speed drives to provide more efficient cooling. Eastern Health's EMS actions include conducting energy and lighting audits to help identify improvement areas, replacing existing lighting with efficient technologies, and adopting air conditioning shutdown procedures to reduce energy consumption.

Each of the three health service's action plans are sufficiently aligned with their respective energy efficiency goals. However, in St Vincent's case its 2011–13 action plan was not approved by senior management until May 2012.

Eastern Health is more advanced than the other two health services in documenting detailed plans for specific energy efficiency initiatives. These plans clearly outline the goals, expected benefits, possible risks and processes for the delivery of each initiative. Conversely, St Vincent's has no detailed planning for specific energy efficiency initiatives.

Each of the three audited health services has processes in place to monitor progress against the energy-related aspects in their EMS. Austin Health reports annually against its main energy efficiency goals, and this reporting shows it is meeting these goals. However there is no documented evidence showing Austin Health's progress to date in implementing its energy efficiency actions. Eastern Health and St Vincent's annually report on progress against pre-existing energy efficiency goals and actions in their EMS. In St Vincent's case, its latest EMS shows that it is delivering energy actions as intended. However, progress to date could not be verified for Eastern Health because its latest EMS is still in draft.

3.4.2 Environment and Resource Efficiency Plans

Austin Health and St Vincent's have prepared EREPs—plans to reduce energy and water use for intensive users—in line with regulatory requirements. Eastern Health's lower energy and water consumption levels mean that it is exempt from preparing an EREP.

The value of Austin Health's and St Vincent's planning under the EREP program has diminished over time. This is because the majority of energy saving actions in Austin Health's and St Vincent's EREPs were planned for completion during 2008 and 2009. There was only one energy-saving action with a planned completion date beyond 2011, and many other recent actions were not directly linked with energy savings.

In terms of implementation, we could not assess whether completed EREP actions had been delivered as intended because:

- Austin Health's and St Vincent's revised EREPs were often merged with end of year reports, making it hard to differentiate projected savings from actual savings.
- The Environment Protection Authority's finalising of health services' EREPs was often not timely. For example, Austin Hospital's original EREP for the reporting period of 2007–08 was not approved until 21 May 2009.
- Austin Health's EREPs were revised several times during one reporting period and it was difficult to trace why the changes were made.

At May 2012 the Environment Protection Authority was reviewing the EREP program. It is unclear whether the program will continue beyond its scheduled conclusion in December 2014.

Recommendations

2. The Department of Health should adopt a more focused and strategic approach to planning for energy efficiency in the health sector to:
   - support consistent planning at a health service level
   - align with statewide goals for health services.
3. The Department of Health, in consultation with the Department of Treasury and Finance and health services, should update its strategic implementation plan for the Greener Government Buildings program to incorporate:
   - the approved program rollout to 20 health services
   - learnings from the energy performance contract delivered at the Peter MacCallum Cancer Centre.
4. The Department of Health and the Department of Treasury and Finance should agree on which healthcare facilities are to be included in the Greener Government Buildings program going forward.
5. The Department of Health, after consulting the Department of Treasury and Finance and approved energy service companies, should assess the risks associated with:
   - the Department of Health's modified approach to delivering energy performance contracts in health services
   - the industry's capacity to deliver energy performance contracts in line with the Department of Health's planned rollout under the Greener Government Buildings program.
6. The Department of Treasury and Finance should strengthen its governance arrangements for the Greener Government Buildings program to:
   - better protect its investments through the program
   - influence departments' participation by clarifying roles and responsibilities and its required involvement in delivering and scheduling energy performance contracts
   - clarify departments' performance reporting obligations
   - encourage information sharing between departments.

Appendix A.

Audit Act 1994 section 16—submissions and comments

Introduction

In accordance with section 16(3) of the *Audit Act 1994* a copy of this report was provided to the Department of Health, Austin Health, Eastern Health, St Vincent's, the Department of Treasury and Finance and the Environment Protection Authority with a request for submissions or comments.

The submission and comments provided are not subject to audit nor the evidentiary standards required to reach an audit conclusion. Responsibility for the accuracy, fairness and balance of those comments rests solely with the agency head.

Responses were received as follows:

RESPONSE provided by the Secretary, Department of Health

Department of Health
Secretary

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DX 210311

22 AUG 2012

e2807581

Mr Des Pearson
Auditor-General
Victorian Auditor-General's Office
Level 24, 35 Collins Street
MELBOURNE VIC 3000

Dear Mr Pearson

Thank you for your letter of 9 August 2012 enclosing a copy of the report on *Energy efficiency in the health sector*. The department would like to acknowledge the collaborative approach adopted by your office throughout the audit process. This letter forms the Department of Health's response for inclusion in the audit report under section 16(3) of the *Audit Act 1994*.

The department welcomes the report and is pleased that it recognises the achievements of the department and health system in improving energy efficiency in a period when both floor area and health service activity have increased. The energy efficiency measures acknowledged include a continued investment in energy efficiency in health care capital works, continuation of 36 megawatts of co-generation in the some of the State's largest hospitals and direct investment in energy efficiency.

The department also welcomes the opportunities highlighted for improvement in its approach to energy efficiency. The department is undertaking work across the recommended areas and will strengthen its focus on these in its work program. The department will enhance and better document its approach to planning for energy efficiency to improve alignment between statewide and health service goals. The department will work to improve its use of energy performance measures in the health system, noting that the measures are consistent with those used by other health jurisdictions and that their effective deployment is an important area for consideration.

The department remains committed to the Greener Government Buildings program and working with the Department of Treasury and Finance and Energy Service Companies to deliver the significant energy improvements that the program promises to deliver. The department does, however, note that the scale of the program for health is significantly greater than for other government portfolios and, whereas this provides a greater opportunity, it also presents a greater level of complexity in implementation.

RESPONSE provided by the Secretary, Department of Health – continued

The department accepts all the recommendations and looks forward to working with health services, the Department of Treasury and Finance and Energy Service Companies to further improve the energy efficiency of the Victorian public health care system.

Yours sincerely

Dr Pradeep Philip
Secretary

RESPONSE provided by the Chairperson, Eastern Health

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Mr Des Pearson
Auditor General
24/35 Collins St
Melbourne 3000

RECEIVED
24 AUG 2012
VICTORIAN AUDITOR-GENERAL'S OFFICE

23 August 2012

Dear Mr Pearson

RE: Performance audit: Energy Efficiency in the Health Sector

Eastern Health is pleased to provide the required information to your audit team enabling them to accurately assess and report on the energy performance of Eastern Health within the Victorian Health Sector. Eastern Health acknowledges the validity of the findings relevant to Eastern Health based on the information requested by your office during the course of the audit.

Eastern Health continues to express its commitment to the Victorian Government policy framework and its subsequent role in improving the energy efficiency of the health sector as developed by the Department of Treasury and Finance. Eastern Health acknowledges its role in the implementation of policy as a body corporate established under the Health Services Act (1988). In addition, it supports the clarification of roles between Government, the Department of Health, the Department of Treasury and Finance and the Metropolitan Health Services with respect to the governance, planning and implementation of programs addressing energy efficiency.

Eastern Health considers this role clarity to be particularly relevant in ensuring health services implement energy efficiency programs within the specific governance and risk exposure context commensurate with their levels of accountability and resource. Further, Eastern Health supports a planning and implementation framework that has a high potential for success in delivering energy efficiency outcomes while mitigating unnecessary or undue clinical and organizational risks.

Thank you for the opportunity to participate in this audit.

Yours sincerely

Dr Joanna Flynn AM
Chairperson
Eastern Health

CC: Alan Lilly, Chief Executive, Eastern Health

RESPONSE provided by the Secretary, Department of Treasury and Finance

Department of Treasury and Finance

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RECEIVED 22 AUG 2012 VICTORIAN AUDITOR-GENERAL'S OFFICE

Mr Des Pearson
Auditor-General
Level 24, 365 Collins Street
MELBOURNE VIC

Dear Mr Pearson

DTF RESPONSE TO PROPOSED AUDIT REPORT: *ENERGY EFFICIENCY* IN THE HEALTH SECTOR

Thank you for your letter of 9 August 2012 inviting me to make a submission regarding the proposed audit report.

DTF accepts the recommendations of the proposed report. In relation to the specific recommendations at page 28 of the proposed audit report at point six, DTF provides the following submission.

In general Departments and Agencies have cooperated with the Greener Government Buildings (GGB) program and its Guidelines. However, as the GGB program has evolved and matured, particular agencies or departments have tailored processes and the standard contractual framework to fit their particular requirements.

DTF considers that a structured engagement between DTF, departments and the energy services companies prior to release of departmental Requests for Proposals and EOI's, where deviations from the standard GGB Guidelines and associated standard processes are contemplated, will better serve the efficient delivery of the GGB program.

DTF has recently joined the Department of Health's governance committee for the GGB program and will amend the GGB Guidelines to provide for a more structured engagement between DTF, departments and energy services companies.

Yours sincerely

Grant Hehir
Secretary

Victoria

Auditor-General's reports

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Report title	Date tabled
Carer Support Programs (2012–13:1)	August 2012
Investment Attraction (2012–13:2)	August 2012
Fare Evasion on Public Transport (2012–13:3)	August 2012
Programs for Students with Special Learning Needs (2012–13:4)	August 2012

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